

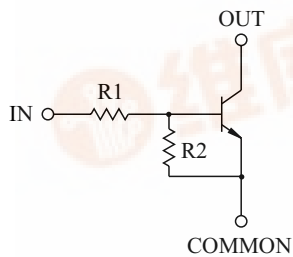
KEC**SEMICONDUCTOR
TECHNICAL DATA****KRC836U~KRC842U****EPITAXIAL PLANAR NPN TRANSISTOR**

SWITCHING APPLICATION.

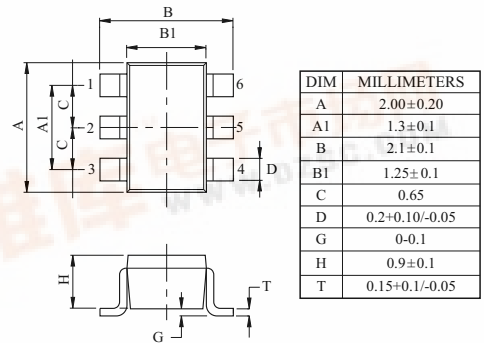
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION

FEATURES

- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.

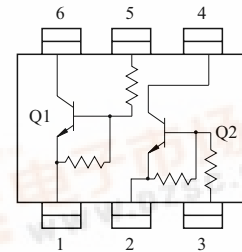
EQUIVALENT CIRCUIT

TYPE NO.	R1(k Ω)	R2(k Ω)
KRC836U	1	10
KRC837U	2.2	2.2
KRC838U	2.2	10
KRC839U	4.7	10
KRC840U	10	4.7
KRC841U	47	10
KRC842U	100	100



1. Q₁ COMMON (EMITTER)
2. Q₂ COMMON (EMITTER)
3. Q₂ IN (BASE)
4. Q₂ OUT (COLLECTOR)
5. Q₁ IN (BASE)
6. Q₁ OUT (COLLECTOR)

US6

EQUIVALENT CIRCUIT (TOP VIEW)**MAXIMUM RATING (Ta=25℃)**

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC836U~842U	V _O	50	V
Input Voltage	KRC836U	V _I	10, -5	V
	KRC837U		12, -10	
	KRC838U		12, -5	
	KRC839U		20, -7	
	KRC840U		30, -10	
	KRC841U		40, -15	
	KRC842U		40, -10	
Output Current	KRC836U~842U	I _O	100	mA
Power Dissipation		P _D *	200	mW
Junction Temperature		T _j	150	℃
Storage Temperature Range		T _{stg}	-55 ~ 150	℃

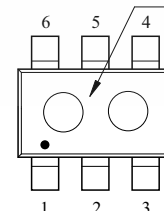
* Total Rating.

MARK SPEC

TYPE	KRC836U	KRC837U	KRC838U	KRC839U	KRC840U	KRC841U	KRC842U
MARK	Y2	Y4	Y5	Y6	Y7	Y8	Y9

Marking

Type Name



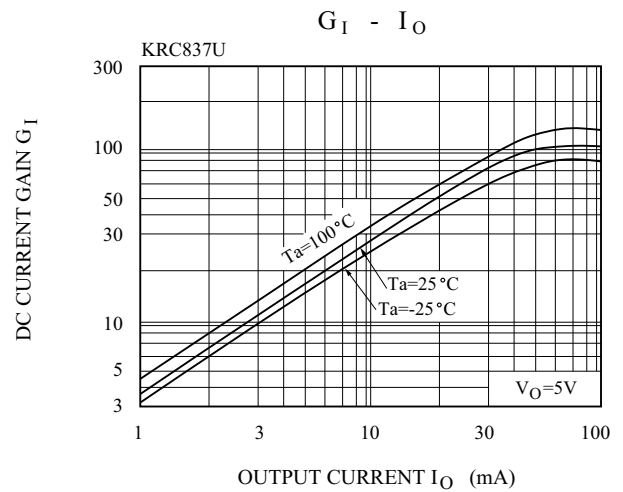
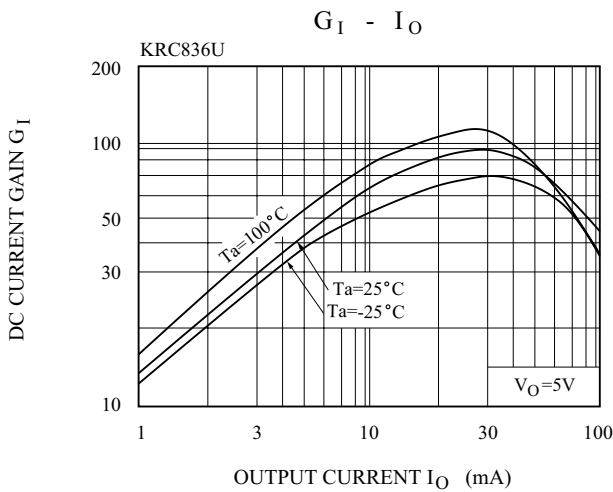
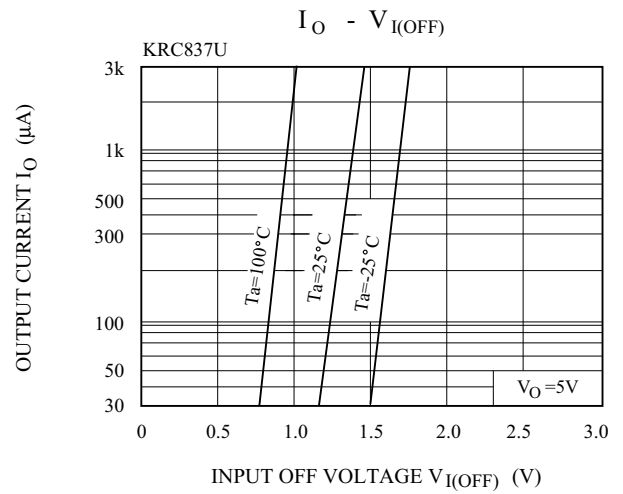
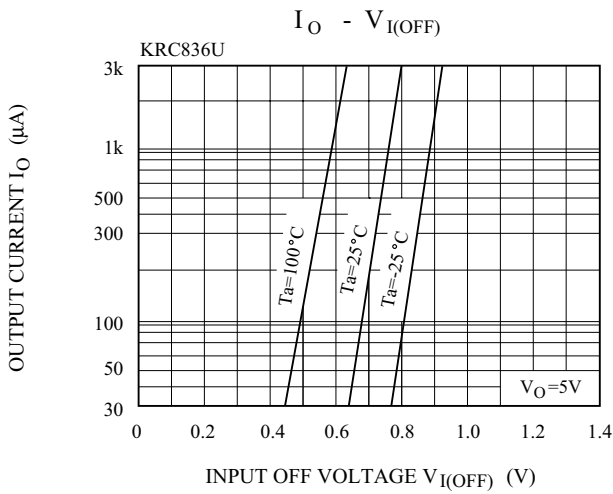
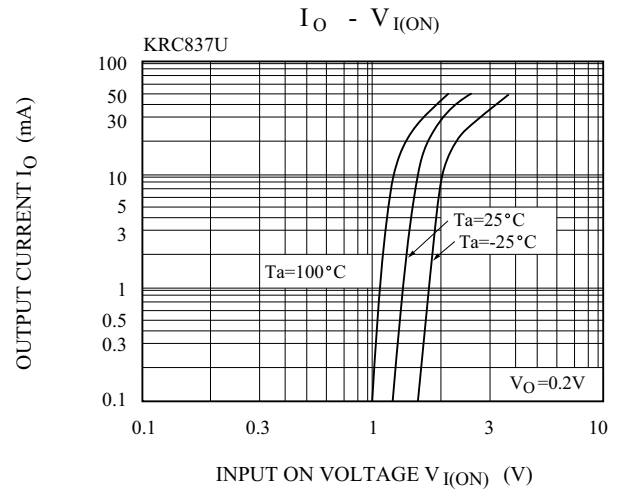
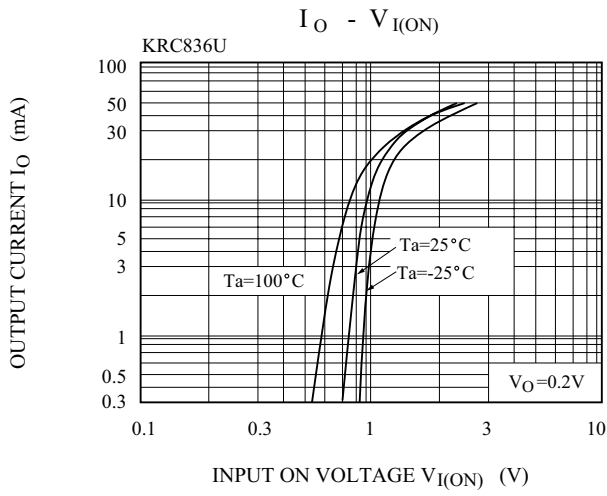
KRC836U~KRC842U

ELECTRICAL CHARACTERISTICS (Ta=25 °C)

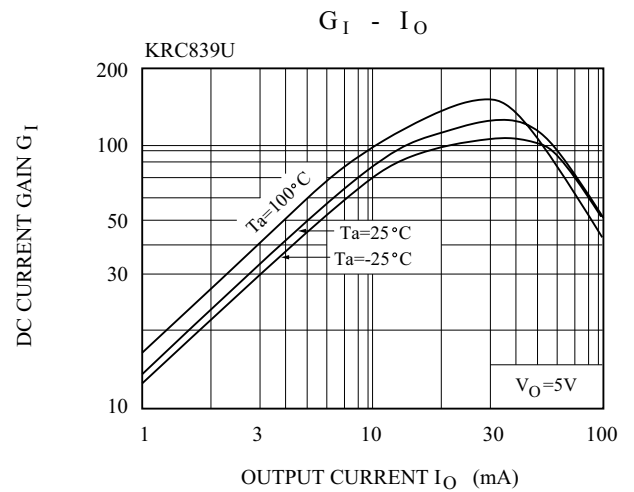
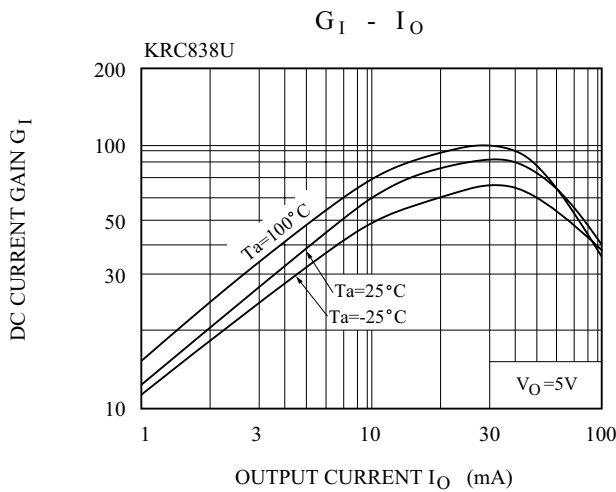
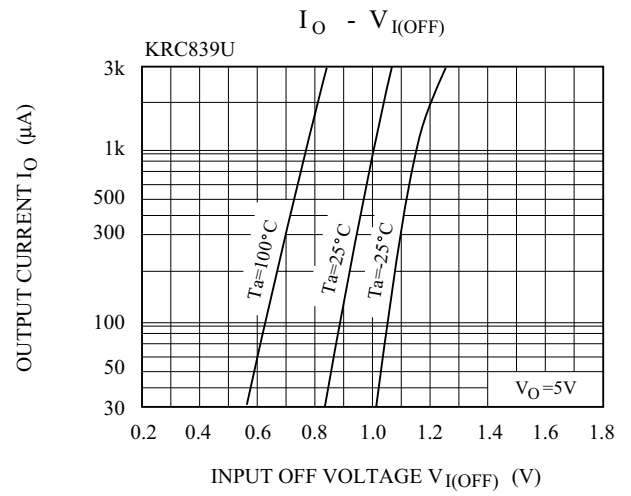
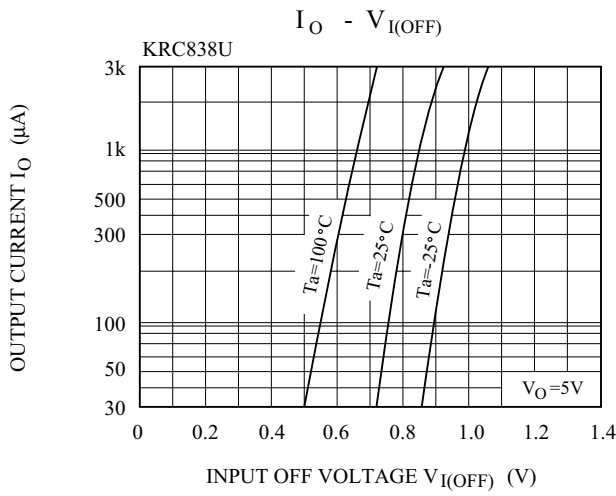
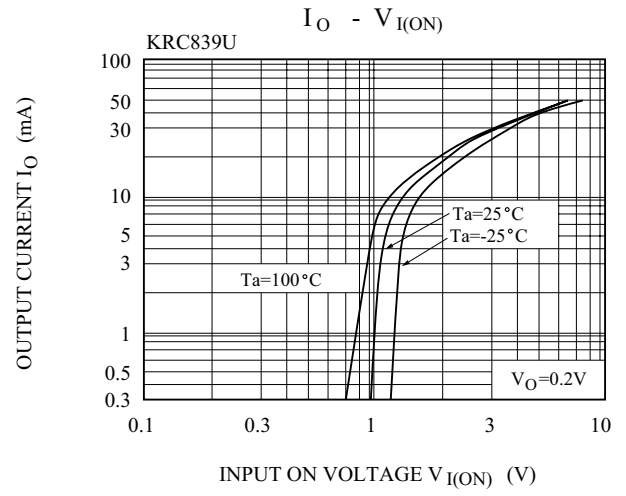
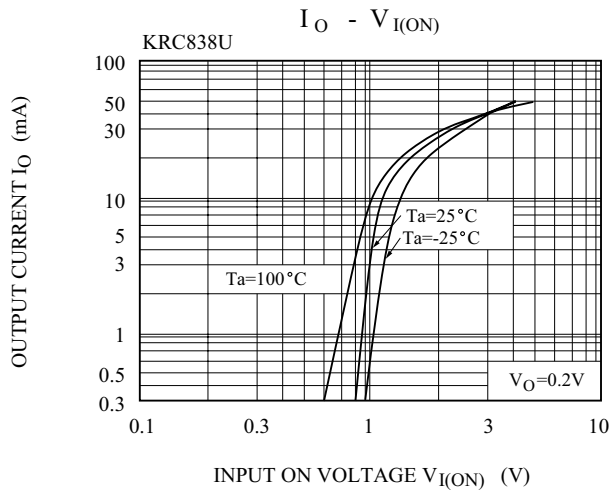
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC836U~842U	$I_{O(OFF)}$	$V_O=50V, V_I=0$	-	-	500	nA
DC Current Gain	KRC836U	G_I	$V_O=5V, I_O=5mA$	33	-	-	
	KRC837U		$V_O=5V, I_O=20mA$	20	-	-	
	KRC838U		$V_O=5V, I_O=10mA$	33	-	-	
	KRC839U		$V_O=5V, I_O=10mA$	30	-	-	
	KRC840U		$V_O=5V, I_O=10mA$	24	-	-	
	KRC841U		$V_O=5V, I_O=5mA$	33	-	-	
	KRC842U		$V_O=5V, I_O=5mA$	62	-	-	
Output Voltage	KRC836U	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	-	-	0.3	V
	KRC837U		$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	
	KRC838U		$I_O=10mA, I_I=0.5mA$	-	-	0.3	
	KRC839U		$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	
	KRC840U		$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	
	KRC841U		$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	
	KRC842U		$I_O=5mA, I_I=0.25mA$	-	0.1	0.3	
Input Voltage (ON)	KRC836U	$V_{I(ON)}$	$V_O=0.3V, I_O=20mA$	-	0.98	3	V
	KRC837U		$V_O=0.3V, I_O=20mA$	-	1.83	3	
	KRC838U		$V_O=0.3V, I_O=20mA$	-	1.22	3	
	KRC839U		$V_O=0.3V, I_O=20mA$	-	1.76	2.5	
	KRC840U		$V_O=0.3V, I_O=2mA$	-	2	3	
	KRC841U		$V_O=0.3V, I_O=2mA$	-	3.9	5	
	KRC842U		$V_O=0.3V, I_O=1mA$	-	1.64	3	
Input Voltage (OFF)	KRC836U	$V_{I(OFF)}$	$V_{CC}=5V, I_O=100\mu A$	0.3	0.63	-	V
	KRC837U			0.5	1.15	-	
	KRC838U			0.3	0.67	-	
	KRC839U			0.3	0.82	-	
	KRC840U			0.8	1.68	-	
	KRC841U			1	3.09	-	
	KRC842U			0.5	1.17	-	
Transition Frequency	KRC836U~842U	f_T^*	$V_O=10V, I_O=5mA$	-	250	-	MHz
Input Current	KRC836U	I_I	$V_I=5V$	-	-	7.2	mA
	KRC837U			-	-	3.8	
	KRC838U			-	-	3.8	
	KRC839U			-	-	1.8	
	KRC840U			-	-	0.88	
	KRC841U			-	-	0.16	
	KRC842U			-	-	0.15	

Note : * Characteristic of Transistor Only.

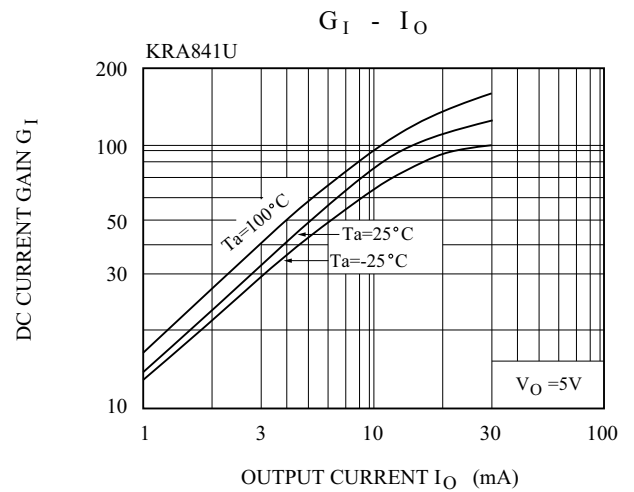
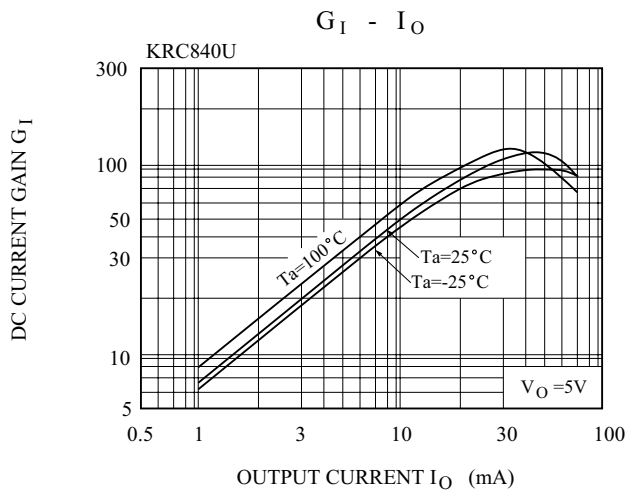
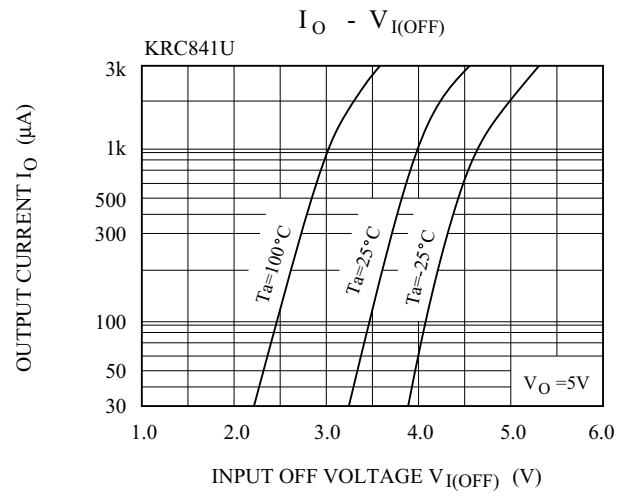
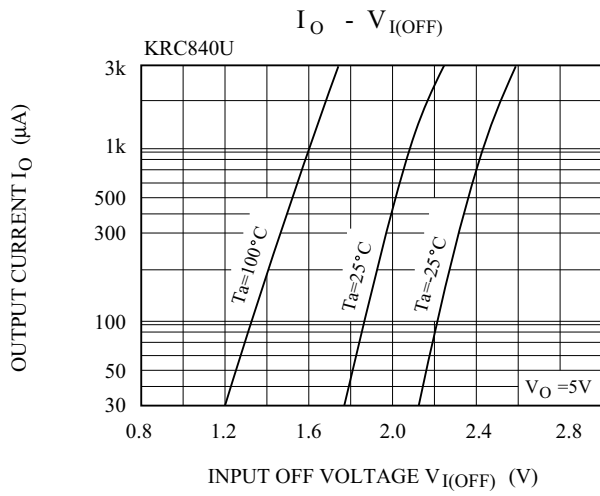
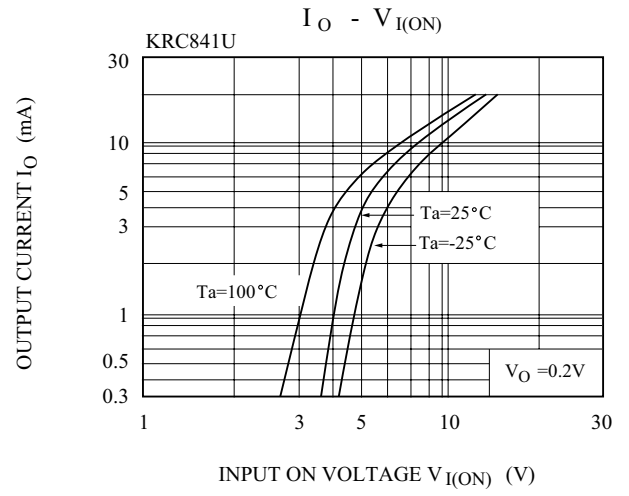
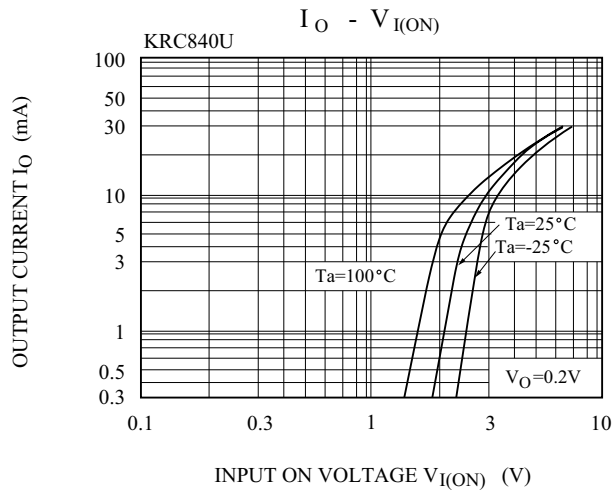
KRC836U~KRC842U



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